

# Worksite Wellness Program Keeps Employees Healthy



**RESEARCH BRIEF**  
**Center for Health Improvement**

JULY 2008

In the past two decades, the United States has seen alarming increases in obesity<sup>1</sup> and related chronic conditions, such as diabetes<sup>2</sup>. Such conditions not only decrease the quality of life of those affected, but also cost public and private sector employers billions of dollars annually<sup>3</sup>. By reducing obesity and improving overall health, employers and communities can reduce both suffering and costs.

Studies suggest that workplace-based interventions promoting healthy behaviors may improve employee health<sup>4,5</sup>. To explore whether a wide-ranging set of environmental and policy interventions can have a positive effect on employee health, the Center for Health Improvement (CHI) worked with the University of Michigan and the State University of New York to study the impact of a worksite wellness program on employees of the California Department of Health Services (CDHS).

"Creating an evidence-based program to keep employees healthy is a worthy undertaking for any employer, public or private," says Sandra Shewry, MPH, MSW, CDHS director, who championed the program from the outset. "Because we are health professionals, it seemed especially appropriate that our department attempt to demonstrate the real value of such an effort."

Over a three-year period, a series of 13 health interventions, ranging from walking programs to healthier vending machine choices, was implemented at the CDHS headquarters in Sacramento. Findings suggest that the interventions helped employees maintain their health status, rather than suffering expected declines over time. The success and popularity of the worksite wellness initiative

prompted the newly formed California Department of Health Care Services (CDHCS) and the California Department of Public Health (CDPH)<sup>6</sup> to adopt the program permanently and spread it to satellite offices throughout the state.

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Sandra Shewry, MPH, MSW  
 Director, California Department of Health Services

"We believe that by institutionalizing the worksite wellness program, we will continue to support our own workforce, as well as help set the standard for employers throughout the state," notes Mark Horton, MD, MPH, state public health officer and director of the California Department of Public Health (CDPH).

## About the Worksite Wellness Research Team

The study was supported by funding from a Centers for Disease Control and Prevention Health Protection

Research Initiative grant. Investigators from the University of Michigan partnered with the State University of New York at Brockport (SUNY-Brockport), CHI, and CDHS to design and implement the program. University of Michigan Principal Investigator Dee Edington, PhD, supervised data collection and analyses to measure the population's health over time. SUNY-Brockport's Thomas Golaszewski, EdD, measured changes in wellness policies, health services, and program administrative structures, in addition to changes in the physical environment. CHI, led by Project Director Patricia E. Powers, MPPA, and Project Manager Esperanza Zúñiga, created and managed an employee-driven process for selecting and implementing health interventions. CHI also facilitated



data collection, ensuring that the State of California's high standards for confidentiality were met.

### Methods and Population Studied

While several studies have demonstrated the effectiveness of particular worksite interventions in improving employee health<sup>4,5</sup>, few have examined the impact of a constellation of separate interventions promoting exercise, nutrition, and healthy personal choices, such as smoking cessation, in conjunction with multiple changes in the supporting work environment and policy structure. This three-year study, launched in October 2004, measured the impact of a multi-pronged program on both the organization and its employees.

"We propose that people, like chameleons, will change to reflect their environments. Therefore, if you want healthy people, simply create healthy environments," says Golaszewski. To test this theory, researchers conducted pre- and post-intervention health risk assessments (HRAs), using a self-administered survey developed by the University of Michigan, with

employees at CDHS headquarters in Sacramento. When the study began, CDHS employed 2,640 people with an average age of 47.9 years, the majority of whom were female (69.1 percent of the population). Voluntary HRAs were offered to employees in 2005, 2006, and 2007: The cumulative response rate over the three-year period was 54.5 percent, excluding new employees. According to Dr. Edington, this figure is extraordinarily high, given the absence of any kind of employee financial incentive for taking the HRA.

Other components of the study included: 1) assessments of the level of environmental and policy support for employee heart health before and after the intervention period using HeartCheck, an inventory checklist tool; and 2) a comparison of employee sick time in the pre- and post-intervention periods.

A survey of 200 employees was conducted one year into the program, in October 2005. This early study found high rates of awareness of the study and participation in several of the interventions.

For comparison, researchers initially looked at the CDHS office in Richmond, CA, a worksite of similar size. However, the Richmond site experienced dramatic restructuring and no longer proved a meaningful comparison site by the end of the study.

### Program Description

In early 2005, an employee advisory committee was established at CDHS, consisting of employees from a variety of divisions and staff levels and representing the diversity of their workforce, including persons with disabilities. The committee selected "Step Up" as the name for the wellness program. A marketing firm was hired to design a logo, which was then used on promotional brochures, posters, and other giveaways to promote participation in HRAs and various interventions. The committee brainstormed measures that might promote nutrition, fitness, and healthy personal choices, then reviewed research regarding

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Thomas Golaszewski, EdD  
Professor, SUNY-Brockport

### References

- 1 National Center for Chronic Disease Prevention and Health Promotion. Division of Nutrition, Physical Activity and Obesity website, Centers for Disease Control and Prevention, updated March 4, 2008.
- 2 Sloan, Frank, et al. "The Growing Burden of Diabetes Mellitus in the US Elderly Population." *Archives of Internal Medicine*. Jan 2008;168:192-199.
- 3 Agency for Healthcare Research and Quality. Medical Expenditure Panel Survey, 2008.
- 4 Musich, Shirley, et al. "Examination of Risk Status Transitions Among Active Employees in a Comprehensive Worksite Health Promotion Program." *Journal of Occupational and Environmental Medicine*. 2003; 45:393-399.
- 5 Pelletier, Kenneth R. "A Review and Analysis of the Clinical and Cost-Effectiveness Studies of Comprehensive Health Promotion and Disease Management Programs at the Worksite: Update VI 2000-2004." *Journal of Occupational and Environmental Medicine*. Oct. 2006; 47: 1051-1058.
- 6 As of July 2007, during the third year of the study, the California Department of Health Services split into the California Department of Health Care Services and the California Department of Public Health. The study location and population remained the same.
- 7 Edington, Dee. "Emerging Research: A View From One Research Center." *American Journal of Health Promotion*. 2001; 15(5):341-349.



each program's evidence-base to evaluate each potential intervention thoughtfully. A project committee, including department researchers, vetted the interventions and forwarded a list of recommendations to CDHS Director Shewry, who approved 13 in all. (See sidebar for list of approved interventions).

### Summary of Representative Interventions

Each intervention posed its own challenges and opportunities. External factors, including budget cuts and staff reductions, created some unique challenges. In addition, a separate entity administers CDHS's health benefits, so the committee was unable to offer financial or wellness benefit incentives common in private companies. Similarly, interventions related to stairwell improvements, vending machines, and other infrastructure changes required approval from a separate agency. In the end, implementing all 13 initiatives took longer than expected. Despite these delays and barriers, the interventions showed positive effects and allowed employees to maintain their health status. In the absence of such barriers or in a program of longer duration, these favorable results may have been even more dramatic. Below is a brief description of two representative interventions.

**Farmers' Market** The committee recommended that a farmers' market be established near the CDHS building to provide employees with easy access to fresh produce.

CDHS team members contacted the Certified Farmers' Market Association, which agreed to open the market and assume all operational costs and duties, including permitting and insurance coverage. Program costs included \$1,200 to cover parking meters near the market; \$275 for promotional signs; \$805 to the city for "no parking" signs; \$900 for promotional farmers' market tote bags; and \$5,000 for promotional farmers' market cookbooks. Cookbooks included employee-submitted healthy recipes that used farmers' market ingredients.

To encourage employee attendance at the market, the committee sent weekly e-mails to employees, held an opening-day All-Employee Walk to the market,

### Step Up Interventions

13 worksite interventions were approved for the study:

**Farmers' Market:** Weekly farmers' market established within walking distance of the office, providing fresh produce from May to October.

**Know Your Numbers Campaign:** Annual two-month educational campaigns offering free blood pressure and body fat screenings and educational sessions.

**Stairwell Improvements:** Aesthetic improvements and motivational signage to encourage stair use.

**Farmers' Market Treasures Cookbook:** A cookbook that contained healthy recipes contributed by employees and provided free to employees who completed an HRA.

**Healthy Vending Machine Choices:** Healthy snacks added to office vending machines and labeled with the Step Up logo.

**Wellness Website and Monthly Fit Tips:** A website and monthly "Fit Tip" encouraging employees to engage in healthy behaviors.

**Walking Routes Promotion:** Monthly all-employee Step Up walks, plus a walking map of the nearby area distributed to all employees via e-mail.

**Noontime Wellness Talks:** A series of monthly talks by health experts.

**Exercise Room Improvements:** Mirrors and other enhancements added to existing workout rooms.

**Exercise Buddy Bulletin Board:** An electronic bulletin board allowing employees to find potential sports or fitness partners.

**Worksite Wellness Committee:** An employee advisory committee representing all levels of the organization.

**Healthier Choices at Nearby Deli:** Meetings with owners of a local deli frequented by employees to coordinate the promotion of more fruit and other nutritious foods.

**Step Up Brand and Incentives:** Branding and promotional efforts to encourage participation in interventions.



promoted healthy recipes through the Step Up website, and offered tote bags as raffle prizes for participating employees.

The Tuesday Fremont Farmers' Market opened in July 2005 and initially remained open for three months. In 2006, the market ran for four months, and in 2007 for six months. Some 1,000 people attended every week, including CDHS employees and the general public. Employee feedback surveys indicated that 98 percent of employees were aware of the market, and 86 percent visited at least monthly.



**Know Your Numbers Campaign** To encourage employees to monitor their own health, the Step Up program launched a campaign in 2006 called Know Your Numbers, which offered nine weeks of free blood pressure checks during the lunch hour. In 2006, more than 1,400 blood pressure readings were administered. In 2007, the campaign was expanded to 10 weeks and included body fat and blood pressure measurements. More than 2,000 readings were taken. Educational sessions on blood pressure and cholesterol were also offered. Participants received blood pressure tracker bookmarks with their readings, educational materials, and token incentives.

Program costs were nominal and included \$1,000 for supplies, \$1,000 for incentives, and \$1,300 for on-site delivery of fresh fruit. Of the 53 percent of employees who reported having their readings taken during the study, nearly half said they learned something new. HRA results indicated an increase in self-reported high blood pressure: In 2005, 19.3 percent of the population reported having high blood pressure, versus 23.1 percent in 2007. In 2005, 58.8 percent reported knowing their blood pressure numbers versus 60.7 percent in 2007. In an employee feedback survey completed by 600 employees in January 2008, 55 percent expressed interest in future on-site screenings.

## Findings

Comparison of pre- and post-intervention scores found that the employee advisory committee's efforts led to substantial improvement in the Heart Check score measuring institutional support for employee cardiovascular health. In the initial Heart Check assessment in 2004, the Sacramento CDHS office scored a total of 70 out of 226

points, or an overall score of "good" based on well-established standards. By November 2006, when many interventions had already been completed, the score increased to 129 points, or "excellent," among the top 1 percent of companies ever measured by Heart Check. Six of seven sub-categories improved, including nutrition, physical activity, stress management, screening, and administrative support.

Results of the HRAs, which measured 15 health risks, including high cholesterol, high body-mass index, and little physical activity, showed that employees generally maintained their risk status. According to Dr. Edington, the goal of a successful program would be a worksite population where 70 percent fell into the low-risk group. By comparison, at the outset of the study in 2005, roughly half the CDHS participants had "low-risk" status. After the intervention period, the proportion rose slightly, although the increase was not statistically significant.

According to Dr. Edington, "Maintenance of employees with a low-risk status over a three-year period itself represents improvement." Previous research suggests that in working populations with no wellness initiatives, the percent of people at low risk decreased, and the percent at high risk increased over time<sup>7</sup>. He added, "The fact that the CDHS participants showed a slight, though not statistically significant, increase in the percent of employees at low risk



counters expectations that this category would have decreased over time. Therefore, maintenance of the percentage of employees at low risk can be viewed as a positive outcome of the study.”

For individual HRA items specifically related to the interventions, significant changes were observed. The percentage of people reporting daily use of stairs increased from 53.9 to 59.3 percent, and the percentage of people walking or biking to work at least once a week grew from 39.8 to 46.7 percent. At the same time, the worksite saw a statistically significant decrease in employee sick time, from 12.66 hours to 11.56 hours over a three-month period.

At its conclusion, the program surveyed employees about their interest in and enthusiasm for Step Up, which gained 90 percent recognition within CDHS.

- 70 percent of respondents called the program “very” or “extremely” valuable for morale.
- 92 percent wanted to see an employee wellness website.
- 99 percent believed nutrition and regular physical activity contribute to higher productivity on the job.
- 75 percent said they would participate in future farmers’ markets; 62 percent in health fairs; 52 percent in a fitness center; 50 percent in stairwell climbing; 57 percent in blood pressure checks; 53 percent in body-fat testing; and 53 percent in cholesterol testing.

### Key Lessons Learned

Overall, the program was highly effective in terms of both health and costs, largely owing to the following strategies:

- In the absence of common private sector health-benefit or compensation incentives, other low-cost



offerings, such as raffle prizes, T-shirts, and cookbooks with employee recipes, can significantly motivate government employee participation in HRAs and worksite wellness interventions.

- Program championship at all levels of an organization, especially at the highest level is critical to a program’s success. In this study,

Shewry encouraged her direct reports to assume personal responsibility for an intervention. She also took part in many interventions and attended several employee advisory committee meetings and encouraged her senior staff to do the same.

- Continuous, proactive marketing of the program is critical to raise awareness and participation. This program drew on fiestas, brochures, lobby promotions, peer-to-peer encouragement, regular e-mail reminders, and refreshed information, such as recipes, rotating stairwell signage, and other promotional efforts to achieve a high level of employee engagement.
- With government organizations especially, program planners should expect to work closely with other agencies over a long period of time to implement changes, particularly to infrastructure (stairwells, vending machines, events in public spaces).
- An inclusive, employee-driven approach can help engage employees with a wide range of abilities, ages, backgrounds, and interests at all levels of the organization.



- Using an evidence-base as a selection criteria for interventions helps maximize a program's chances for successful outcomes.
- With any organization, but particularly with government entities, it is important to convey that the program is voluntary and that participation and results are confidential. To ensure proper procedures and notifications, this study underwent the Institution Review Board processes for the state of California.

### Next Steps

As a result of the findings, the CDHCS and the CDPH announced they will permanently adopt the worksite wellness program. Neal Kohatsu, MD, MPH, CDPH branch chief and CHI board member, expressed enthusiasm for Step Up's future: "The study results and fact that employees have embraced Step Up encouraged leadership to make it an ongoing part of our worksite culture." Directors Horton and Shewry agreed to co-chair the newly formed committee that will build upon successes to date and spread the program to satellite offices throughout the state.



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Improvement**

For more information about this study, please contact the Center for Health Improvement.

The Center for Health Improvement is a national, independent, nonprofit health policy and technical assistance organization dedicated to improving population health and encouraging healthy behaviors.

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This publication was funded in part by a Health Protection Research Initiative grant from the Centers for Disease Control and Prevention.

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